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10/806,591

03/23/2004

Matthew R. Sivik

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05/19/2009

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EXAMINER

LANG, AMY T

ART UNIT

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3731

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/806,591 | Applicant(s) SIVIK ET AL. | |
| | Examiner AMY T. LANG | Art Unit 3731 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,10,12-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 10, 12-14, and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1, 5, 13, 14, and 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson et al. (US 5,308,514) in view of Smith, Jr. (US 4,966,722).

With regard to **claims 1, 16, and 17**, Olson et al. (hereinafter Olson) discloses a grease composition comprising overbased calcium sulfonate containing solid particles of colloidally dispersed calcium carbonate in the form of calcite (column 1, lines 4-16). The grease composition also contains lubricating oil and a salt forming acid (column 4, lines 20-28; column 5, lines 23-26). Olson further discloses the acid as an organic acid, specifically succinic acid (column 4, lines 20-26).

However, Olson does not specifically disclose the succinic as substituted with a hydrocarbyl. Smith, Jr. (hereinafter Smith) teaches that hydrocarbyl substituted succinic

Art Unit: 3731

acids are well known in the art. Specifically hydrocarbyl moieties comprising an alkyl group from 10 to 20 carbon atoms (column 19, line 60 through column 20, line 31).

Since Olson broadly discloses a succinic acid in the grease composition and Smith teaches that hydrocarbyl substituted succinic acids are well known in the art, it would have been obvious to one of ordinary skill in the art at the time of the invention for Olson to utilize the hydrocarbyl substituted succinic acid of Smith.

In addition, Olson teaches that the grease composition may comprise various polymer viscosity index improvers. However, Olson does not specifically disclose the viscosity index improvers. Smith teaches that ethylene-alpha-olefin copolymers are effective viscosity index improvers in lubricating compositions (column 1, lines 8-17). However, these copolymers tend to produce a haze in the composition. Smith further teaches wherein the addition of hydrocarbyl substituted succinic acids eliminates this haze in a lubricating composition (column 2, lines 40-61). The specific hydrocarbyl substituted succinic acids include hydrocarbyls having from 10 to 20 carbon atoms (column 19, line 60 through column 20, line 31). Therefore, it also would have been obvious to one of ordinary skill in the art for Olson to utilize the viscosity index improver and hydrocarbyl substituted succinic acid of Smith to produce a composition with improved viscosity index and a reduction of haze.

With regard to **claim 5**, Smith specifically discloses the hydrocarbyl moiety as decyl, dodecyl, tridecyl, etc. (column 20, lines 27-31).

With regards to **claims 13 and 14**, the process to prepare the composition, as disclosed by Olson, involves first mixing overbased calcium sulfonate, lubricating oil,

Art Unit: 3731

and an acid producing compound (Example 1, column 8). Water, an aqueous solvent, was then added to the mixture followed by heating of the mixture to 280 degrees Fahrenheit (Example 1, column 8). The heating would intrinsically remove the water from the mixture by evaporation to produce a colloidal grease mixture. Olson further discloses adding additives to the grease mixture including viscosity index improvers (viscosity modifiers), oxidation inhibitors (rust inhibitors), and more (column 6, lines 8-19)

Olson does not disclose the specific use of phosphoric acid or succinic acid in Example 1 as the acid producing compound. Although Olson uses boric acid in the specific example, phosphoric acid and succinic acid are also other embodiments of the invention that are disclosed which would have been obvious to utilize.

4. **Claims 10 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson (5,308,514) in view of Smith, Jr. (US 4,966,722) as applied to claim 1 above, and further in view of Muir (US 4,560,489) and Ney (US 5,392,525).

Olson in view of Smith discloses a grease composition comprised of an overbased organic acid, an acid producing compound, and lubricating oil. The organic acid, calcium sulfonate, is present in the composition up to 28 wt% (column 2, lines 45-50). The acid producing compound is present from 0.6 to 3.5 wt% (column 5, lines 29-32). Although Olson discloses the specific wt% of boric acid, other embodiments of the acid producing compound include phosphoric acid and succinic acid so that it would have been obvious to utilize these compounds from 0.6 to 3.5 wt%. The lubricating oil

Art Unit: 3731

is present from 60 to 90 wt% (column 5, lines 23-26). The performance additive phenyl alpha naphthylamine, an oxidation inhibitor, is present in the composition at 8.3 grams, wherein the total composition weighing 1,660 grams (Example 1, column 8). Therefore, 0.5 wt% of the performance additive is present in the grease composition. The compound 12-hydroxystearic is present in the composition from 1 to 6 wt% (column 5, lines 33-42).

While Olson does not explicitly disclose a thickening agent, Muir provides evidence that 12-hydroxystearic acid is a known thickener to a grease composition (column 3, lines 9-17).

Olson does not specifically disclose a copolymer derived from an olefin and an unsaturated dicarboxylic acid anhydride.

Ney also discloses a lubricating composition with a polymer based viscosity index improver (column 1, lines 4-8). The viscosity index improver comprises a copolymer with olefin and dicarboxylic acid anhydride, specifically maleic anhydride, monomer units (column 6, lines 37-42; column 7, lines 15-18; column 8, lines 31-67). This specific viscosity index improver aids in viscosity and dispersancy modification.

Since the polymer disclosed by Ney not only functions as a viscosity index improver, but also aids in dispersant properties, and Olson discloses a polymer viscosity index improver, it would have been obvious for Olson to utilize the viscosity index improver disclosed by Ney. Therefore, the invention of Olson would comprise an acid producing compound of a copolymer.

Response to Amendment

5. The Affidavit under 37 CFR 1.132 filed 12/30/2008 is insufficient to overcome the rejection of claims 1, 5, 10, 12-14, and 16-18 based upon Olson in view of Smith applied under 35 USC 103 as set forth in the last Office action because: the showing is not commensurate in scope with the claims, it is not a comparison of the closest prior art, and it is not a proper comparison of inventive and comparative data.

The Affidavit shows three compositions each prepared in accordance with Example 1 of the specification. The first composition in the Affidavit utilizes dodecyl succinic acid and the second and third compositions utilize succinic anhydride. The first composition is shown to have reduced water spray off.

However, the Affidavit is not found persuasive since it is not commensurate in scope with the claims. Independent claims 1, 13, and 18 only broadly disclose a succinic acid and not the narrow dodecyl succinic acid. Case law holds that evidence is insufficient to rebut a prima facie case if not commensurate in scope with the claimed invention. *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983). Although dependent claims recite the use of dodecyl succinic acid, these claims also recite the use of other succinic acids.

Additionally, the Affidavit is not found persuasive since it is not a comparison of the closest prior art. Case law holds that comparative showings must compare the claimed subject matter with the closest prior art to be effective. See *In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 71 (CCPA 1979). In this case, the Affidavit only shows the comparison of dodecyl acid. However, Smith teaches the hydrocarbyl moiety as

Art Unit: 3731

decyl, dodecyl, tridecyl, etc. Also, the Affidavit uses succinic anhydride which Olson does not comprise.

Lastly, the Affidavit is not a proper side-by-side comparison of inventive and comparative data. The first composition, the inventive example, comprises calcium sulphonate at 66.36 wt% and the succinic compound at 2.22 wt%. However, the comparative examples, the second and third compositions, comprise different amounts. The second composition comprises 63.5 wt% of calcium sulfonate and 0.68 wt% of the succinic compound. The third composition comprises 63 wt% of calcium sulphonate and 1.36 wt% of the succinic compound.

Response to Arguments

6. Applicant's arguments, filed 12/30/2008, with respect to the 35 USC 112 rejection have been fully considered and are persuasive. The rejection has been withdrawn.

7. Applicant's arguments, filed 12/30/2008, with respect to the 35 USC 103 rejection have been fully considered but they are not persuasive.

Specifically, applicant argues (A) that Smith is directed towards a lubricating oil and not a grease composition.

With respect to argument (A), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied

upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, as Applicant states, “greases and lubricants are known in the same general technical field.” Additionally, Smith is only used to teach one advantageous component to a composition. Therefore, Smith teaches a component within Applicant's endeavor that is also pertinent since it advantageously reduces haze.

Specifically, applicant argues (B) that Smith discloses the use of hydrocarbyl substituted succinic acids to reduce haze and not to reduce water spray off as instantly disclosed in the specification.

With respect to argument (B), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 3731

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY T. LANG whose telephone number is (571)272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

05/11/2009

/Amy T Lang/

Examiner, Art Unit 3731

/Anhtuan T. Nguyen/

Supervisory Patent Examiner, Art Unit 3731